Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Review of the Spectrum Sharing Plan	)	
Among Non-Geostationary Satellite Orbit	)	IB Docket No. 02-364
Mobile Satellite Service Systems in the	)	
1.6/2.4 GHz Bands	)	
	)	
Amendment of Part 2 of the Commission's	)	
Rules to Allocate Spectrum Below 3 GHz	)	
for Mobile and Fixed Services to Support	)	
the Introduction of New Advanced	)	ET Docket No. 00-258
Wireless Services, including Third	)	
Generation Wireless Systems	)	
	)	

CONSOLIDATED OPPOSITION TO PETITIONS FOR RECONSIDERATION

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Date: October 27, 2004

SUMMARY

Globalstar LLC ("GLLC") opposes the petitions for reconsideration of the Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking, FCC 04-134 (released July 16, 2004) ("Order"), filed by the Wireless Communications Association International, Inc. ("WCA"), Sprint Corporation, Nextel Communications, Inc., and the Society of Broadcast Engineers ("SBE").

WCA, Nextel and Sprint object to the new Broadband Radio Service ("BRS") sharing the 2496-2500 MHz band segment with the Mobile-Satellite Service ("MSS"). However, these petitioners have not demonstrated why BRS and MSS cannot share the 2496-2500 MHz band segment on a geographic basis as the Commission envisioned in the Order.

GLLC generally agrees with the technical conclusion that co-frequency, co-coverage sharing is not feasible for MSS and BRS. But, the Commission premised MSS-BRS sharing on geographic sharing. To effectuate sharing, the Commission must limit BRS operations to the top 35 MSAs, limit BRS base station power to an EIRP of 600 watts, and, limit out-of-band emissions from BRS users, for 99% of the time, to an aggregate not to exceed -209 dBW/Hz at any point outside the boundaries of the 35 MSAs in the frequency range 2483.5-2500 MHz. In its own Petition for Reconsideration filed in this docket, GLCC proposed these rules to facilitate geographic sharing of 2496-2500 MHz between MSS and BRS.

Globalstar can effectuate this geographic distribution of service by allocating different 1.23 MHz channels of S-band to different geographic regions based on a

complex resource allocation scheme. However, the Commission must adopt the restrictions on BRS stated above. Imposing these requirements on BRS stations will make it feasible for Globalstar to use 2496-2500 MHz for MSS in rural areas while BRS uses 2496-2500 MHz in urban areas.

If the BRS interests decline to share the spectrum, then the BRS allocation should be eliminated from 2496-2500 MHz. BRS has been allocated another 148 MHz in the 2500-2690 MHz band, and so, BRS is the service that is least in need of the 2496-2500 MHz band segment. On the other hand, the 2496-2500 MHz band segment represents critical and necessary spectrum, in use today, for vital MSS services. Globalstar is an operational MSS system, providing critical voice, data and other telecommunications services to the military, to national security and emergency preparedness agencies, and to subscribers in unserved and underserved areas throughout the United States and the globe.

The record in this docket demonstrates that Globalstar needs access to all 16.5 MHz in S-band to support the growing demand for its services and to deploy an Ancillary Terrestrial Component ("ATC"). The Commission accepted Globalstar's showing of need in this docket and allowed Globalstar to retain usable access to its originally assigned 11.35 MHz of L-band and 16.5 MHz of S-band, although segments of the L-band and S-band will be shared under rules adopted in the Order. The solution to the sharing issues raised by the BRS interests is to coordinate MSS and BRS through geographic separation.

SBE expresses concern that MSS ATC systems cannot co-exist in the 2483.5-2500 MHz band with the limited number of licensees for Broadcast Auxiliary Service ("BAS") Channel 10. Globalstar has previously acknowledged that MSS-ATC and BAS stations would not be able to operate co-frequency in the same geographic area. If relocation is required, then the relevant record justifies that the following conditions be placed on relocation:

First, relocation of BAS would only be required if Globalstar implements an ATC system, and only for Channel 10 stations operating in proximity to the geographic service zone of a planned ATC site. Second, the authorized conversion for a Channel 10 licensee must be limited to conformity with the existing BAS channel plan. Third, because S-band is the only spectrum available to MSS Above 1 GHz licensees for base station-to-user terminal links, BAS licensees of Channel 10 should be required to negotiate conversion.

Fourth, the MSS licensee should not be required to pay more than the costs of replacement equipment and other costs reasonably related to conversion, consistent with the Commission's rules for conversion of BAS stations by 2 GHz MSS licensees. Fifth, the Commission should require Channel 10 licensees to demonstrate, as a condition to conversion, that (a) their licenses conform to Footnote NG147, (b) their licenses had not expired prior to, and (c) they were actually using Channel 10 for BAS purposes as of February 10, 2003, the date on which was released the decision adopting rules for ATC use of the 2483.5-2500 MHz band. These principles will allow relocation of BAS, if necessary, on an equitable basis.

TABLE OF CONTENTS

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	)	
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CONSOLIDATED OPPOSITION
TO PETITIONS FOR RECONSIDERATION

Pursuant to Section 1.429 of the Commission's Rules (47 C.F.R. § 1.429), Globalstar LLC ("GLLC") hereby opposes the petitions for reconsideration of the Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking, FCC 04-134 (released July 16, 2004) ("Order"), filed by the Wireless Communications Association International, Inc. ("WCA"), Sprint Corporation, Nextel Communications, Inc., and the Society of Broadcast Engineers ("SBE").[1]

[1] GLLC also filed a petition for reconsideration of the Order on September 8, 2004, requesting, *inter alia*, adoption of rules to effectuate geographic sharing between Mobile-Satellite Service ("MSS") and Broadband Radio Service ("BRS") licensees.

WCA, Sprint and Nextel ("the BRS Interests") seek reconsideration of the Commission's decisions to allocate the 2496-2500 MHz band segment for BRS and relocation of MDS Channel 1 users while (i) retaining the primary allocation for MSS in the band, (ii) allowing certain Broadcast Auxiliary Service ("BAS") stations to remain in the band, and (iii) not modifying the power limits for Part 18 Industrial, Scientific and Medical ("ISM") devices operating up to 2500 MHz. The BRS Interests argue that all these incumbent uses should be eliminated to allow MDS Channel 1 licensees currently at 2150-2162 unencumbered access for relocation to the new BRS-1 at 2496-2502 MHz.

In its Petition, SBE contends that broadcasters cannot share BAS Channel 10 (2483.5-2500 MHz) with an MSS Ancillary Terrestrial Component ("ATC") nor with BRS, and proposes a reconfiguration of BAS Channels 8, 9 and 10 to eliminate sharing in the 2483.5-2500 MHz band between MSS-ATC, BRS and BAS.

GLLC owns and operates the international 1.6/2.4 GHz MSS business offered through the Globalstar™ non-geostationary satellite constellation. Currently, the Globalstar system is authorized to operate, and does operate, MSS downlinks in the 2483.5-2500 MHz band. GLLC generally agrees with the technical conclusion of the BRS Interests regarding the ability of MSS and BRS to operate co-frequency in the same geographic area. However, GLLC believes that the Commission correctly determined that geographic separation will allow both MSS and BRS to use the 2496-2500 MHz band segment. Similarly, geographic separation of MSS-ATC and BAS stations must be considered in the frequency modifications proposed by SBE.

I. THE COMMISSION CAN RESOLVE THE CONCERNS OF WCA, SPRINT AND NEXTEL BY REMOVING THE BRS ALLOCATION FROM THE 2496-2500 MHZ BAND SEGMENT.

At a time when there is insufficient spectrum available to meet all demands, the Commission is compelled to implement spectrum-sharing solutions to provide spectrum access for as many services as possible. The Commission's adoption in the Order of an allocation for BRS fixed and mobile services, excluding aeronautical services, in the 2496-2500 MHz band segment is one such solution. Although GLLC does not believe that a case for allowing BRS stations to share the 2496-2500 MHz with MSS has been made, GLLC does not dispute that geographic separation of the two services makes sharing the band segment theoretically possible.

On the other hand, the MDS/BRS industry, which WCA represents,[2] is demanding completely unencumbered replacement spectrum for MDS Channel 1, and is seeking to eliminate all existing services in the 2496-2500 MHz band segment. To accomplish its goal, WCA argues that:

- The Commission should ensure that MDS Channel 1 licensees are "no worse off" as a result of relocation to BRS-1, although WCA's proposals would make MSS, BAS and ISM significantly worse off.
- The Commission should suppress 25% of Globalstar's downlink spectrum at 2496-2500 MHz, and should clear this 4 MHz for BRS users, even though BRS has been assigned another *148 MHz* unencumbered in the 2500-2690 MHz band.

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[2] WCA claims that its membership includes the vast majority of BRS licensees. WCA Petition, at 3. Nextel (Petition, at 13) and Sprint (Petition, at 5-6) join with WCA in seeking elimination of MSS use of the 2496-2500 MHz band segment, based on arguments similar to those of WCA.

- The Commission should clear spectrum for MDS Channel 1 users, who have kept fallow the 2150-2156 MHz for decades, at the expense of *operational* MSS, ISM and BAS stations.

WCA claims (Petition, at 12) that the Commission must "consider the equities" in determining how to coordinate spectrum usage among BRS, MSS, BAS, and ISM. It is obvious that in considering the equities, BRS is the service that is least in need of the 2496-2500 MHz band segment, that uses its existing allocations less intensively than nearly every other service, and that, consequently, is the least deserving of unencumbered access to additional spectrum.

The BRS Interests' request for clearing the 2496-2500 MHz band segment is clearly unjustified because of the enormous bandwidth already made available to BRS. Not counting 2496-2500 MHz, BRS has *148 MHz* in the 2500-2690 MHz band in which to operate[3] -- five times what is available to Big LEO systems.

While the 2496-2500 MHz band segment is a miniscule portion of the overly-generous spectrum allocation of 152 MHz that the Commission has provided BRS, it represents critical and necessary spectrum, in use today, for vital MSS services. Moreover, Globalstar is an *operational* service, providing critical voice, data and other telecommunications services to the military, to national security and emergency preparedness agencies, and to subscribers in unserved and underserved

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[3] See Amendment of Parts 1, 21, 73, 74, and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2562 and 2500-2690 MHz Bands, Report and Order and Further Notice of Proposed Rulemaking, FCC 04-135, ¶¶ 37-38 (released July 29, 2004).

areas throughout the United States and the globe. Based on WCA's own data, the MDS industry has warehoused MDS Channel 1 for decades; even now, MDS licensees have only a few subscribers and operational systems.[4] This record indicates BRS is unlikely to be operational at 2496-2502 MHz for years to come.

WCA's touted principle (Petition, at 4) of making BRS-1 licensees "no worse off" than they were with MDS-1 is even inconsistent with its source in the microwave relocation orders.[5] The Commission used that phrase to characterize the operational equipment to be provided microwave incumbents displaced by new PCS licensees.[6] It did not describe relocated licensees' spectrum rights in such terms.

Rather, with respect to spectrum rights, the Commission stated that microwave incumbents would be entitled only to sufficient capacity "to satisfy their needs at the time of relocation, rather than to match the overall capacity of the system."[7] The Commission concluded that it would not serve the public interest to hold spectrum for licensees entitled to relocation "with the expectation that some

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[4] See Amendment of Parts 1, 21, 73, 74, and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2562 and 2500-2690 MHz Bands, Notice of Proposed Rulemaking and Memorandum Opinion and Order, 18 FCC Rcd 6722, 6735-36 (2003) (citing WCA's data on limited operation of MDS video and data systems, although primarily in urban areas).

[5] See Nextel Petition, at 3 n.7.

[6] Amendment of the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, 11 FCC Rcd 8825, 8843 (1996).

[7] Id. at 8841.

may require additional capacity in the future."[8] If the Commission applied this principle to the spectrum rights of MDS Channel 1 licensees, then most would not merit access to any spectrum rights in BRS-1, and there would be no issue about sharing with MSS. MDS-1 licensees have had 10 or 20 years to build out systems, and cannot claim to be harmed if they lose spectrum rights now that they have never used for service to the public. The Commission has reallocated spectrum from MSS based on current usage and similar conclusions about anticipated future needs.[9] With respect to BRS, 20 years of non-use of MDS plus substantial available spectrum at 2.5 GHz for BRS future uses demonstrate in exactly the same way that BRS will not be hampered by loss of the 2496-2500 MHz band segment.

For those MDS-1 licensees that have used their spectrum, the Commission has attempted to locate BRS-1 in proximity with other MDS/BRS licensees in the 2500-2690 MHz band. Nevertheless, it was by no means necessary for the Commission to add 4 MHz from the MSS band to the spectrum available for MDS. Now, the BRS Interests have complained about the difficulties that they perceive in using the 2496-2500 MHz band, and, despite having 148 MHz elsewhere, seek to have MSS and BAS cleared and the operating parameters of ISM modified. Moreover, WCA acknowledges (Petition, at 23-24) that the widespread ISM devices

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[8] Id.

[9] See Amendment of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Services, 18 FCC Rcd 2223, 2238-39 (2003).

currently producing emissions up to 2500 MHz should not be recalled, and will, therefore, remain a constant source of degrading interference to BRS. Meanwhile, MSS has found ways to share the spectrum with ISM without significant difficulty.

The Commission's BRS allocation decision was premised on its conclusion that BRS could voluntarily share with MSS and BAS and not be harmed by ISM. Based on the BRS Interests' analyses, that faith in BRS appears misplaced. BRS is not willing to cooperate with other services, thereby undermining the Commission's efforts to make limited spectrum resources available to all who need them. Given that BRS has 148 MHz in which to operate without the 4 MHz in the 2496-2500 MHz band segment, and that MSS, BAS and ISM are all providing important services now that may be affected by sharing with BRS, the obvious solution to the BRS Interests' complaints and the least disruptive solution to existing consumers is to withdraw the 2496-2500 MHz allocation for BRS and find another home for MDS Channel 1 licensees in the 2500-2690 MHz band or some other band where the BRS Interests would find the operating environment more to their liking. At the least, the Commission should only allow relocation of MDS-1 stations to BRS-1 to the extent that the former are actually serving consumers as of the release date of the Order.

II. THE COMMISSION'S PLAN FOR BRS-MSS SHARING IS WORKABLE WITH MODIFICATIONS.

GLLC generally agrees with the technical conclusion of the BRS Interests that co-frequency, co-coverage sharing is not feasible for MSS and BRS.[10] GLLC, however, disagrees with the solution and analyses submitted by the BRS Interests, and urges the Commission to retain its plan for shared access for the 2496-2500 MHz band segment.

A. The Commission Correctly Premised MSS-BRS Sharing on Geographic Regions.

The Commission decided (Order, ¶ 72) that MSS-BRS sharing was technically feasible because:

> BRS operations are likely to be in urban, suburban, and somewhat developed rural areas while the greatest demand for CDMA MSS operations is likely to be in very rural and undeveloped areas with little or no existing communications infrastructure.

Thus, reallocation of the 2496-2500 MHz band segment for BRS was based on the Commission's expectations that (a) CDMA MSS operations would be viable in rural and undeveloped areas of the United States and (b) BRS and MSS-ATC operations would be available in urban, suburban and somewhat developed areas. WCA acknowledges (Petition, at 10) that MSS-BRS spectrum sharing is feasible based on geographic separation of service areas.

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[10] See WCA Petition, at 5; Nextel Petition, at 5; Sprint Petition, at 3.

Despite its plan for geographic separation, the Commission failed to adopt restrictions on BRS that would allow sharing to flourish. GLLC pointed out in its Petition for Reconsideration of the Order that the Commission must adopt the following restrictions on BRS operations in the band in order to realize MSS-BRS sharing:

> First, limit BRS operations to the top 35 MSAs;
>
> Second, limit BRS base station power to an EIRP of 600 watts;
>
> Third, limit out-of-band emissions from BRS users, for 99% of the time, to an aggregate not to exceed -209 dBW/Hz at any point outside the boundaries of the 35 MSAs in the frequency range 2483.5-2500 MHz.

Imposing these requirements on BRS stations will make it feasible for Globalstar to use 2496-2500 MHz for MSS in rural areas while BRS uses 2496-2500 MHz in urban areas.

WCA expresses concern about the ability of Globalstar to effectuate this geographic distribution of service.[11] These concerns are misplaced. WCA bases its objection on misunderstandings about how satellite downlink transmissions operate and the impact of the existing, international PFD limits.

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[11] WCA Petition, at 7-11; see also Sprint Petition, at 4-5. WCA's lengthy discussion of the international PFD limits on MSS in S-band is based on a faulty assumption that MSS downlinks are transmitting nationwide at the same power levels continuously at all times. This is not how the Globalstar system operates. Similarly, WCA's attachments demonstrate worst case analyses of satellite transmissions operating at the PFD limits; these analyses are worthless on the issue of how to share the spectrum geographically, again because they do not reflect operational scenarios.

Globalstar allocates frequencies on a 1.23 MHz channel basis in each satellite beam. Since it started operations in the U.S. in late-1999, Globalstar has been allocating different 1.23 MHz channels of S-band (and L-band) to different geographic regions based on a complex resource allocation scheme that is controlled by its gateways and network control center.

Downlink S-band transmissions at a given frequency (1.23 MHz channel) generally will differ from one beam to another depending on which gateway is being covered by each beam and how many users are being supported in each beam. Since Globalstar operates with 16 beams per satellite and several satellites over the U.S. at any given time, there is regional control of frequencies, rather than the nationwide assumptions on which WCA's analyses are based. See Tech. App., § 1.

In short, WCA's statements about satellite operations and regional control are just wrong. Globalstar can fulfill the geographic separation requirements for MSS and BRS to share the 2496-2500 MHz, as the Commission planned. However, the Commission must adopt the restrictions on BRS stated above to effectuate this plan.

B. CDMA MSS Operations Need the 2496-2500 MHz Band Segment.

WCA is also wrong about Globalstar's lack of need for access to the 2496-2500 MHz band segment. Contrary to the misstatements of WCA, Globalstar needs access to all 16.5 MHz in S-band to support the growing demand for its services. Currently, the United States is one of the largest markets for Globalstar services; approximately one-quarter of all subscribers are U.S. subscribers. In the past year,

the number of U.S. subscribers and minutes of use have continued to increase, and are meeting or exceeding the growth projections that Globalstar has previously placed in this docket. Based on these growth projections, reduction of the available S-band spectrum will adversely impact service quality (e.g., blocked calls) in the first or second quarter of 2005.[12]

Moreover, if Globalstar only has available 10-12 MHz in S-band, it would not be technically feasible to deploy ATC. For MSS services alone, Globalstar expects to require at least 10.5 MHz by March 2005. Accordingly, there would not be enough spectrum available in the U.S. for Globalstar to allocate to an ATC service and maintain an acceptable quality of service for satellite customers.

WCA claims (Petition, at 12-13) that Globalstar cannot expect to retain access to 16.5 MHz in S-band because the Commission proposed to reduce that amount of spectrum to 8.25 MHz when the Big LEO rules were adopted if only one CDMA system became operational.[13] In fact, the Commission's proposal to create 8.25 MHz band segments in the Big LEO spectrum was only applicable to L-band,

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[12] See Globalstar, L.P., Ex Parte Presentation, IB Dkt. No. 02-364 (Feb. 26, 2004).

[13] See Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd 5934 (1994) ("Big LEO Rules Order"), modified on recon., 11 FCC Rcd 12861 (1996).

because the Commission initially split the available 16.5 MHz of L-band unequally between CDMA and TDMA systems.[14]

With regard to reconfiguring the Big LEO spectrum bands, the Commission stated that it would consider a realignment, if necessary, based on the facts relevant to spectrum usage if only one CDMA system became operational.[15] Indeed, the Commission has just completed the proceeding to consider that question, in the very docket in which WCA filed its Petition. Based on the facts in the record, *the Commission decided that Globalstar needed access to all 16.5 MHz of the S-band.* In other words, the actual question posed in the Big LEO rulemaking 10 years ago was answered on the record developed in this docket.

WCA also claims (Petition, at note 24) that Globalstar is only using 7.5 MHz of S-band spectrum based on a filing made by Globalstar previously in this docket. Again, WCA has misapprehended the evidence submitted to this proceeding. In response to a Commission inquiry, Globalstar explained that, as of March 2004, it was fully loaded on 7.5 MHz of S-band spectrum, excluding new aviation services and not having yet implemented ATC, and expected to require the entire 16.5 MHz by March 2005.[16] The point of Globalstar's demonstration was that retaining access to sufficient spectrum is necessary to meet its business projections.

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[14] See Big LEO Rules Order, 9 FCC Rcd at 5959-60.

[15] See id.

[16] See Globalstar, L.P., Ex Parte Presentation, IB Dkt. No. 02-364 (Feb. 26, 2004).

Globalstar has presented factual evidence, and the Commission has agreed, that Globalstar requires access to the entire 16.5 MHz of S-band (and 11.35 MHz of L-band) made available to it under the original Big LEO band plan for current and future operations. Unlike BRS stations, which are not even constructed yet, the Globalstar system was constructed, launched and placed into service based on the frequencies made available to CDMA Big LEO systems. Also unlike terrestrial mobile systems, it is not possible to modify the satellite "cells" to improve spectrum reuse until the next generation system is launched. And, it is not possible to launch the next generation system unless the current satellite system can obtain sufficient revenues over the lifetime of the satellite constellation to finance, or obtain financing, for construction and launch of the next generation system. The available spectrum is the economic base for the current system and the next generation system, and the projections for future growth of subscribers and usages are an integral component of the current financial viability of the system.

The Commission understood this issue, and made a concerted effort in the Order to allow Globalstar to retain usable access to its originally assigned 11.35 MHz of L-band and 16.5 MHz of S-band. The WCA cannot now create differing conclusions from the extensive record in this docket simply to suit its own effort to warehouse as much spectrum as possible for BRS.[17] Globalstar has demonstrated a

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[17] WCA (Petition, at 13 n.24) attempts to use evidence submitted into the record by Iridium to cast aspersions on Globalstar system efficiency and spectrum usage. As noted in the text, the Commission has already reviewed this evidence and determined that Globalstar should have access to 11.35 MHz in L-band and

(continued...)

need for access to 16.5 MHz of S-band spectrum; the Commission has accepted that showing. And, the solution to coordinate MSS and BRS is geographic separation, as Globalstar proposed in its Petition for Reconsideration and restated above.

III. BAS CONVERSION SHOULD BE LIMITED TO NECESSARY CONVERSIONS FOR OPERATING STATIONS.

SBE expresses concern (again) that MSS ATC systems cannot co-exist in the 2483.5-2500 MHz band with the limited number of licensees for BAS Channel 10.[18] SBE recommends that BAS Channels 8, 9 and 10 operating at 2450-2500 MHz be converted to digital operations in three 12 MHz channels that would eliminate overlap with the authorized MSS ATC frequencies. SBE further recommends that MSS and BRS licensees who benefit from the conversion should fund the costs of conversion.

Currently, the Globalstar system is the only operational MSS system using the S-band for MSS, and would, under the Commission's rules for ATC, be the only MSS system that could obtain a license to provide ATC in S-band. Globalstar has previously acknowledged that MSS-ATC and BAS Channel 10 stations would not be able to operate co-frequency in the same geographic area.[19] However, as Globalstar

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(...continued)

16.5 MHz in S-band, although segments of both L-band and S-band are encumbered with new sharing obligations. See Tech. App., § 2.

[18] SBE filed a Petition for Reconsideration of the ATC rules in IB Docket No. 01-185, raising essentially the same issues and recommendations.

[19] See Opposition of Globalstar, L.P., and Globalstar USA, L.L.C., IB Dkt. No. 01-185 (Mar. 3, 2004).

previously noted, it may be that no BAS stations remain operational in Channel 10, in which case, the Commission should terminate all BAS rights to operate at that channel and clarify the status of the licenses in Universal Licensing System database.[20]

If relocation is required, then the relevant record justifies that the following conditions be placed on relocation:

First, relocation of BAS would only be required if Globalstar implements an ATC system. That has not yet occurred, but is anticipated. Moreover, ATC would be used to enhance the availability of Globalstar service primarily in a few urban centers where a user on the ground has difficulty obtaining line of sight to the satellites.[21] Therefore, any requirement to convert Channel 10 stations to other facilities should be limited to those BAS licensees operating in proximity to the geographic service zone of a planned ATC site.

Second, the authorized conversion for a Channel 10 licensee must be limited to conformity with the existing BAS channel plan (47 C.F.R. § 74.602(a)). An MSS licensee should not be required to convert a BAS facility to a channel plan that

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[20] In the ATC Report and Order, the Commission noted that its records indicated that there were no Channel 10 BAS licensees in operation. See Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands, 18 FCC Rcd 1962, 2207, App. C3, § 4.2.2 (2003).

[21] See Globalstar, L.P., Comments, IB Dkt. 01-185 (Oct. 22, 2001); Response to FCC Public Notice 02-554, (Mar. 22, 2002); and Ex Parte Presentation (June 27, 2002).

might require conversion of other neighboring BAS stations not operating on Channel 10. The Commission's rules do not currently allow for a "three-channel" plan within BAS Channels 8 and 9. It would be unreasonable to convert BAS stations to a three-channel operation if it would set off a daisy-chain of conversion for other BAS facilities.[22]

Third, because S-band is the only spectrum available to MSS Above 1 GHz licensees for base station-to-user terminal links, BAS licensees of Channel 10 should be required to negotiate conversion. If the MSS licensee makes a good faith attempt to negotiate conversion, and the BAS licensee chooses not to negotiate conversion, the BAS Channel 10 license should be terminated or deemed secondary to MSS-ATC.

Fourth, the MSS licensee should not be required to pay more than the costs of replacement equipment and other costs reasonably related to conversion, consistent with the Commission's rules for conversion of BAS stations by 2 GHz MSS licensees in 47 C.F.R. § 74.690(c). SBE and WCA (see Petition, at 19) would saddle Globalstar with substantially more costs that it would receive benefits. That is simply not how the Commission's relocation rules work.

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[22] SBE continues to attempt to identify other services that should be required to pay for conversion of BAS licensees in Channels 8, 9 and 10. See SBE Petition, at 7 (identifying MSS and BRS as services to fund conversion). Always notably absent from payors are BAS licensees and TV licensees that benefit from BAS. If conversion to digital would improve operations to the public, or is inevitable, then BAS licensees should be willing to convert themselves.

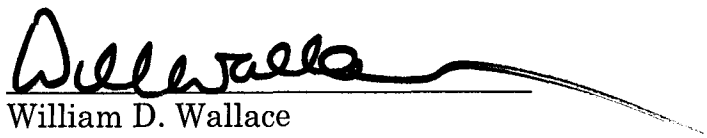
Fifth, the Commission should require Channel 10 licensees to demonstrate, as a condition to conversion, that (a) their licenses conform to Footnote NG147 (47 C.F.R. § 2.106), (b) their licenses had not expired prior to, and (c) they were actually using Channel 10 for BAS purposes as of February 10, 2003, the date on which were released the rules permitting ATC use of the 2483.5-2500 MHz band.

IV. CONCLUSION

The petitions for reconsideration of WCA, Nextel and Sprint seeking to eliminate the MSS allocation at 2496-2500 MHz must be denied, and SBE's petition must be denied to the extent it is inconsistent with the conditions on BAS Channel 10 relocation set forth herein. For the reasons set forth above, the Commission must adopt restrictions on BRS operations to facilitate sharing the 2496-2500 MHz band segment between MSS and BRS in separated geographic regions of the United States. Moreover, if relocation procedures are needed for BAS Channel 10, GLLC urges the Commission to adopt rules and policies for relocation consistent with those principles outlined above.

Respectfully submitted,

GLOBALSTAR LLC



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Oct. 26, 2004

TECHNICAL APPENDIX
GLOBALSTAR LLC

Response to WCA Petition for Reconsideration (IB Docket 02-364)

1. S-band Sharing

In its Petition for Reconsideration at page 5, WCA states: "The two services [MSS and BRS] simply cannot exist on a co-channel, co-coverage basis without causing mutually-destructive interference." WCA also presents tables and figures purporting to show that NGSO MSS systems operating at Resolution 46 PFD levels can cause degradation to BRS systems in the same frequency band.

Based on its own analysis of interference from BRS into Globalstar handsets, Globalstar agrees with WCA, Sprint, and Nextel that the 2496-2500 MHz band cannot be shared by MSS and BRS *in a specific geographic region*. Globalstar demonstrated this conclusion in its Petition for Reconsideration filed in this proceeding on September 8, 2004. Globalstar recommended that the Commission adopt rules to govern geographic separation between MSS and BRS operating in the same frequency band. Specifically, in rural and suburban areas, MSS would be the sole users of this band segment, while in major metropolitan areas, BRS would use this band segment. Since both MSS and BRS have access to other frequencies that are not shared with each other, they can use those other frequencies in geographic regions where they cannot use the 2496-2500 MHz band. Thus, MSS would use lower frequencies (2483.5-2496 MHz) to serve users in urban areas and BRS would use higher frequencies (above 2500 MHz) to serve users in rural and suburban areas. The BRS Interests have shown no technical reason why Globalstar's proposal, which provides for more intense use of the relevant spectrum, is flawed.

WCA states in footnote 10 on page 10 of its Petition that "also instructive are filings that Globalstar made with the Commission in 2002 in support of its contention that an independent terrestrial service could not coexist on a co-channel, co-coverage basis with MSS." Globalstar stands by this contention. However, as stated above, Globalstar's proposed solution is geographic separation between the two services, thus allowing both services access to the band segment in different regions. WCA's request to suppress the MSS allocation entirely in the 2496-2500 MHz band segment is not supported by Globalstar's prior filings with the Commission.

WCA also makes several sweeping statements about Globalstar's operations that demonstrate a complete lack of understanding of the Globalstar system's operational characteristics and capabilities. For example, on page 15, WCA states: "Given that the 2.4 GHz band is utilized by Big LEO MSS licensees for satellite downlink transmissions, there is no practical means by which MSS can restrict the footprint of its transmissions in the 2496-2500 MHz band to avoid interference to BRS channel 1." This is simply false. Globalstar allocates frequencies on a 1.23 MHz basis in each satellite beam. From

commencement of service, Globalstar has been allocating different 1.23 MHz channels of S-band (and L-band) to different geographic regions based on a complex resource allocation scheme that is controlled by its gateways and network control center. Thus, MSS downlink S-band transmissions at a given frequency (1.23 MHz channel) generally will differ from one beam to another depending on which gateway is being covered by each beam and how many users are in each beam. There are 16 beams per satellite and several satellites over the US at any given time; accordingly, there is regional control of frequencies, rather than nationwide control.

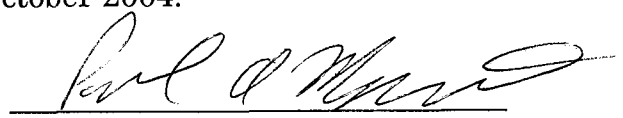
2. Globalstar's Need for the 2496-2500 MHz Band Segment

In footnote 24 on page 17 of its Petition, WCA again misrepresents statements of Globalstar, claiming that "Globalstar has . . . subsequently conceded that it is merely using 7.5 MHz of the band and conceded that it could make do with less than the entire band." The fact that Globalstar had been using only 7.5 MHz at the time of the quoted letter in no way means that Globalstar can "make do" with less than the entire 16.5 MHz of S-band. Globalstar's letter filed in this docket on February 26, 2004, fully explains why Globalstar in fact needs access to the entire 16.5 MHz of S-band, and refutes WCA's assertions.

Engineering Certification

I hereby certify under penalty of perjury that I am the technically qualified person responsible for preparation of the engineering information contained in the foregoing "Technical Appendix"; that I am familiar with the relevant sections of the FCC's Rules, the rules adopted and proposals set forth in the "Report and Order, Fourth Report and Order, and Further Notice of Proposed Rulemaking" (FCC 04-134) in IB Docket No. 02-364 and ET Docket No. 00-258, and the information contained in the foregoing Technical Appendix; and that information in the Technical Appendix is true and correct to the best of my knowledge and belief.

Signed this 26th day of October 2004.



Paul A. Monte
Director, Systems & Regulatory Engineering
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CERTIFICATE OF SERVICE

I, William D. Wallace, hereby certify that I have on this 27th day of October, 2004, caused to be served true and correct copies of the foregoing "Consolidated Opposition to Petitions for Reconsideration" upon the following persons via hand delivery (indicated with an asterisk (*)) or first-class, United States mail, postage prepaid:

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